MTA Status

NFMCC Friday Meeting

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Ilinois Institute of Technology

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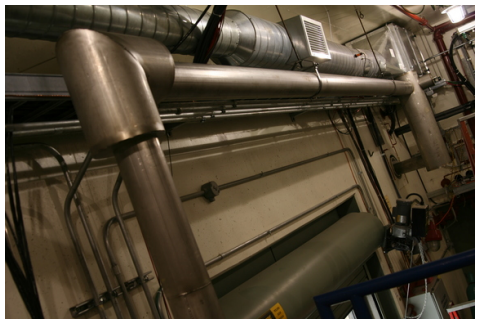
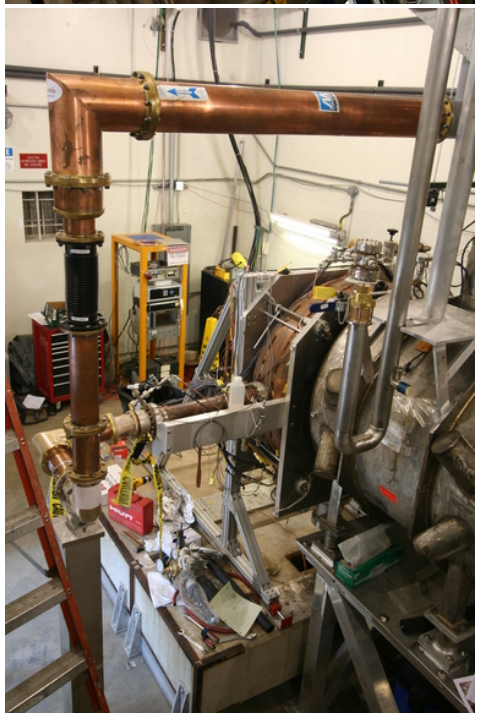
MTA Reconfiguration

- Cryo infrastructure essentially complete
  - Valve boxes in ExpHall, RefRm
  - Transfer line from cryo plant to hall
  - U-tubes

  Still to be commissioned
- Experimental hall configuration mostly complete
  - 201 MHz cavity on new platform
  - RF plumbing rerouted
  - Magnet on new stand
  - Clean room raised

  Will install more signal cables through hatch (during shutdown)
  and reinstall detectors and 805MHz cavity





Beamline

- Pit/hatch shielding blocks staged for installation
- Beam absorber installed, backfill to be finished this week
- Radiation assessment?







Radiation assessment

- Original vision for MTA beam: 100W in LH2 absorber
- Linac capacity 16 Tp/pulse, 15Hz; safety envelope 22k pulses/hr
- Required future addition to overburden (not budgeted)
- Hardware interlock being built to limit pulses/hr in near future
- Facility layout optimal for cryo tranfer line but
  pessimal for radiation shielding (straight shot to RefRm)
- Activation issues with a few thousand full-intensity pulses
- No request for high-dose in NFMCC 5-year plan
- Linac emittance diagnostics part of MTA line
- FNAL radiation safety would prefer single submission for
  radiation assessment at Linac safety envelope
  requires substantial resources (xfer line reroute/hall shielding)
  $\Rightarrow$ further delay to RF program (vacuum and pressurized)
- We have asked FNAL directorate to relax radiation assessment
  to what's practical with existing resources (1-2 pulses/min)

Schedule

- Beam absorber in place, topsoil going on today
- Cable installation to start with shutdown next week
- Pit shield wall can be installed at the same time
- Hatch shielding after cables are pulled
- RF power to 201MHz cavity and 805MHz dummy load once shielding is in place
- Cryo system commissioning over the summer
- Radiation safety assessment to be submitted (not yet converged)
- 805 MHz cavity to be installed when ready
- Pressurized cavity in beam after beam permit and commissioning into hall